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August 1992

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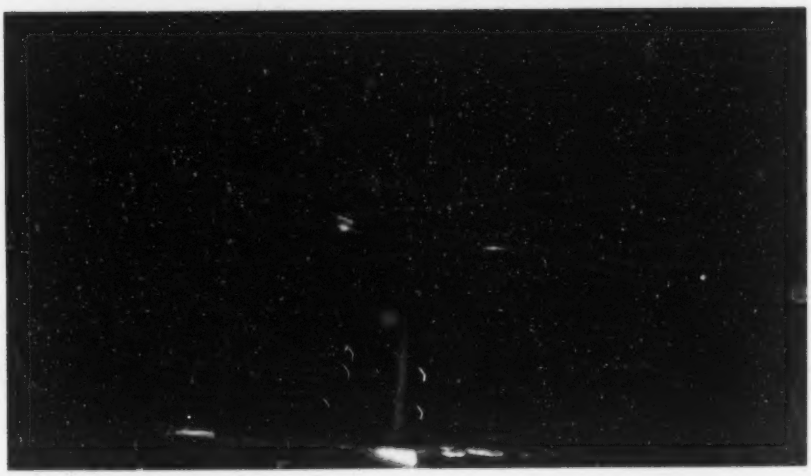

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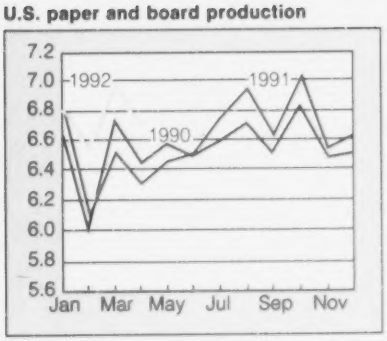
U.S. paper and board production



U.S. production of paper and paperboard totaled 6.7 million tons in April, up 5.7% from the same month last year, the American Paper Institute reported in its latest monthly update. Production through April rose to a seasonally adjusted, annualized rate of 81.2 million tpy, up 4.4% from the same period in 1991. Paper output has grown steadily since the beginning of the year, with output through April up 1.8% from a year earlier after seasonal adjustments. Paperboard output was up 5.2% over the same period.

Among major grades, printing and writing papers and newsprint were largely responsible for the increase in the paper sector. Printing and writing shipments were up 3.1% through the first four months, led by a 6.6% gain for uncoated free-sheet. Containerboard production was up 7.0% through April, driven by continued strong fiber box shipments. Exports of paper and paperboard rose 8.7% in the first quarter, while imports were off by 7.5%.

Canadian newsprint shipments totaled 737,000 metric tons in April, down 0.8% from a year earlier, according to the Canadian Pulp & Paper Assn. Operating rates dropped to 81%. Woodpulp mills operated at 90%, and shipments rose 18.8% for the month to 784,000 tons. ■

	Latest month (000 short tons)		% change from year ago	Annualized year-to-date (000 short tons)	% change from year ago
PAPER & PAPERBOARD PRODUCTION[1]					
Newsprint	Apr.	596	4.0	7,051	4.6
Uncoated groundwood (s)	Apr.	127	-8.0	1,513	-12.6
Coated paper (s)	Apr.	579	3.8	7,195	2.3
Uncoated free-sheet (s)	Apr.	972	6.2	11,697	6.6
Other printing/writing	Apr.	129	0.8	1,493	-2.5
Total packaging and other paper (s)	Apr.	390	1.8	4,725	1.5
Tissue	Apr.	470	-1.5	5,751	-0.5
Total paper	**Apr.**	**3,261**	**2.8**	**39,425**	**2.6**
Unbleached kraft paperboard	Apr.	1,777	11.4	21,770	7.4
Semichemical medium	Apr.	476	3.0	5,913	4.7
Bleached paperboard	Apr.	386	0.8	4,515	-1.1
Recycled paperboard	Apr.	799	9.9	9,589	7.5
Total paperboard	**Apr.**	**3,437**	**8.5**	**41,786**	**6.0**
Total U.S. paper and paperboard output	**Apr.**	**6,698**	**5.7**	**81,211**	**4.4**
PULP, WASTEPAPER & FIBER[2]					
Total U.S. woodpulp production	Apr.	5,489	3.9	65,851	3.4
Market pulp production	Apr.	837	6.9	10,100	10.8
Wastepaper consumption at paper/board mills	Apr.	2,003	14.2	24,173	10.1
Pulpwood consumption (cords)	Mar.	8,411	1.7	99,414	-0.6
CONVERTED PRODUCTS STATISTICS[3]					
Corrugated box shipments (billion ft²)	Apr.	29.178	4.1	111.365[6]	7.0
Containerboard inventories at U.S. box plants and mills	Mar. 31	3,075	2.4		
INTERNATIONAL TRADE[2]					
U.S. paper imports (including products)	Mar.	998	1.0	11,470	-7.5
Imports of Canadian newsprint	Mar.	566	-9.3	6,595[6]	-15.7
U.S. paper exports (including products)	Mar.	759	5.1	8,767	9.0
Exports of unbleached kraft linerboard	Mar.	262	-9.0	3,103	-0.7
Exports of woodpulp	Apr.	622	17.8	7,463	19.1
Norscan pulp inventories[4]	Apr. 30	1,239	-20.5		
Norscan pulp operating rates[4]	Apr.	92%	95%	94%	95%
CANADIAN STATISTICS[5] *(reported in metric tons)*					
Total newsprint shipments	Apr.	737	-0.8	2,793[6]	-5.5
Operating rates	Apr.	81%	87%	81%	92%
Inventories held by U.S. consumers	Apr. 30	n.a.			
Other paper/board shipments	Apr.	645	5.6	2,556	6.9
Woodpulp shipments (export only)	Apr.	784	18.8	3,127	13.2
Operating rates	Apr.	90%	83%	91%	91%

1. American Paper Institute. 2. API, Bureau of Census, American Pulpwood Assn. 3. Fibre Box Assn., Paperboard Packaging Council. 4. North American/Scandinavian paper-grade market pulp. 5. Canadian Pulp & Paper Assn. 6. Not annualized. (s) = Shipments

Market pulp: Strike in British Columbia helps keep recovery in pulp market moving

Grade structure: Chemical paper-grade market pulp is sold in the open market and does not include captive pulp used onsite or shipped to affiliated mills within North America. Pulp is divided into grades based on whether it is made from softwood or hardwood fiber, produced by the sulfate (kraft) or sulfite pulping process, and by the amount of bleaching.

Northern bleached softwood kraft (NBSK) has traditionally been the premium pulp grade because of its long fiber length and strength, although recently southern pine and hardwood pulp have come close to it in price. U.S. pulp statistics include about 2 million tons of fluff pulp production used in diapers and other absorbent hygiene products. Dissolving and mechanical pulp grades are excluded from the statistics. Canada has about 1.64 million tons of mechanical pulp capacity—mainly bleached chemi-thermomechanical market pulp (BCTMP)—although three mills representing about 500,000 tons of capacity are currently idle.

Production/capacity: After declining for two years from the 1988 peak, world pulp shipments rebounded last year as customers began to rebuild inventories. Pulp shipments have remained strong through the first half of 1992 as the inventory restocking has continued in response to a series of price increases announced by producers beginning in the fall of 1991. From the low reached last fall, prices had advanced roughly $80/ton by the second quarter of 1992. The price increase momentum appeared to be slowing by late spring, with customer inventories at fairly high levels and weakness persisting in U.S. and European printing/writing paper production.

However, a strike that began around June 15 in British Columbia appears likely to keep the market in balance through the remainder of the year. Pulp mills in the province account for about half of Canada's total market pulp capacity of 8.4 million metric tons and around 30% of total world softwood supply.

Because of the strike, Canadian pulp production is only forecast to be up 3.5% for all of 1992. This would result in an industry operating rate of about 87% for 1992.

Market trends: NBSK pulp prices have been lagging behind other grades in the recent recovery, and Canadian producers were unable to push through their announced list price of $580 for the second quarter. However, since the outbreak of the strike, Canadian producers have announced a $600/metric ton price for NBSK for the third quarter and there will probably be another increase for the fourth quarter if the strike drags into August.

U.S. southern pine pulp producers were also encouraged to follow hardwood producers in announcing about a $30/ton price increase for the third quarter. U.S. market pulp production is forecast to rise about 11% for all of 1992, with mills running at close to 91% of capacity.

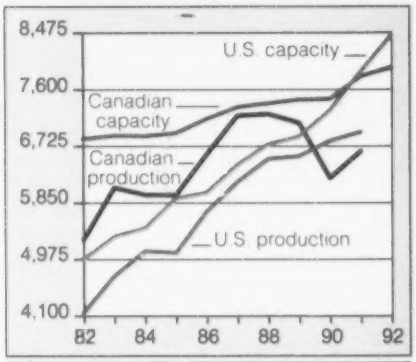
U.S. market pulp capacity is forecast to jump 7.1% this year, following an 8.2% jump in 1991 reflecting the startup of major expansions such as Weyerhaeuser Co. (Columbus, Miss.), Parsons & Whittemore Inc. (Alabama Pine Pulp Co.), and Stone Container Corp. (Savannah River Pulp & Paper Corp.).

Outlook: The pulp market is expected to continue a gradual recovery in 1993 as the world economy begins to pick up. However, capacity from new mills starting up in North America, Chile, and Brazil over the 1990-93 period will restrain the recovery in operating rates and prices.

Canadian pulp production is forecast to rise by at least 5%, reflecting a rebound from strike-depressed 1992 production levels. Canadian operating rates are expected to remain just below 90% as two major projects at Alberta-Pacific and Celgar Pulp Co. startup in 1993. After rising only 1.8% in 1991, Canadian capacity is expected to rise 2.4% in 1993 and 4.5% in 1994. U.S. production is forecast to rise slightly more than 3%.

Operating rates may be helped, however, by recent capacity closures, including Fraser Inc.'s Atholville, N.B., sulfite mill; Cascades Inc.'s Jonquiere, Que., kraft mill; and Weyerhaeuser's Everett, Wash., kraft mill. ■

SUPPLY/DEMAND (000 metric tons)



FORECAST (000 metric tons)

U.S.	1991	1992e	1993e
Production	6,945	7,700	7,910
U.S. capacity[1]	7,882	8,444	8,687
Utilization rate	88.1%	91.1%	91.1%
Imports	2,555	2,605	2,735
Exports	4,689	5,390	5,450
Apparent U.S. consumption	4,811	4,915	5,195
Canada			
Production	6,651	6,910	7,310
Capacity[1]	7,808	7,947	8,180
Utilization rate	85.2%	87.0%	89.4%

e = *Pulp & Paper* estimate.
1. Based on 1991 American Paper Institute and 1992 Canadian Pulp & Paper Assn. capacity surveys.

TOP U.S. PRODUCERS (000 tpy)

	Annual capacity (000 tons)	Market share (%)
1. Georgia-Pacific[1,2,4,5]	1,540	9.3
2. Weyerhaeuser[1,2,4,5]	1,400	8.5
3. Parsons & Whittemore[1,2]	1,110[6]	6.8
4. Canadian-Pacific[1,2]	940	5.7
5. Champion International[1,2]	790a	4.8
6. Stone Container[1,2]	743b[6]	4.5
7. Canfor[1,3]	585c	3.6
8. Federal Paper Board[1,2]	560	3.4
9. Fletcher Challenge[1]	530[7]	3.2
10. Repap[1,3]	480	2.9

Market share of top five companies:
35.3%

Market share of top ten companies:
52.9%

Total U.S. capacity (1992):
16.391 million short tons

1. Bleached softwood kraft. 2. Bleached hardwood kraft. 3. Unbleached kraft. 4. Bleached sulfite. 5. Fluff. 6. Includes major new capacity addition (which may not be fully operational). 7. Reflects recent capacity closure or sale.

Capacity shown on equity ownership basis.
a. Includes 84.6% of Weldwood, which owns 50% of Caribou Pulp. b. Includes 25% of Celgar Pulp.
c. Includes 50% of Howe Sound.

Producers Hope for Market Recovery as Pulp Prices, Production Increase

Market pulp output increases by modest 1.5% in 1991, and prices begin to climb; South American mills make major capacity additions

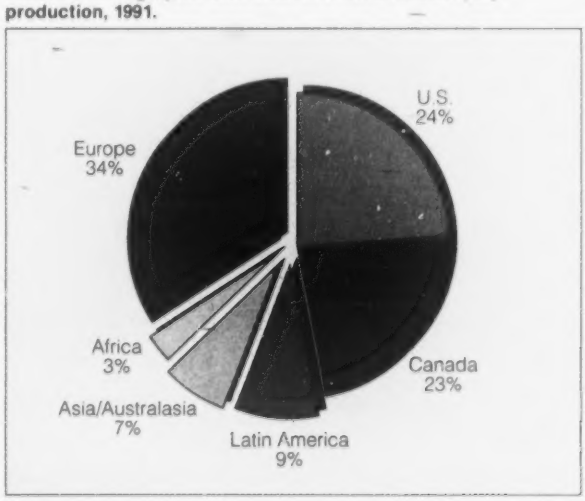
By KELLY H. FERGUSON, Deputy Editor

After almost two years on the decline, the worldwide market pulp market seems to be rebounding. Production and prices have begun to increase and overall capacity continues to grow at a nominal pace for most major grades, based on *Pulp & Paper International*'s 1991 Market Pulp Survey and recent reports from *Pulp & Paper Week*.

World production of all market pulp grades increased a modest 1.5% to 34.5 million tons from 1990 to 1991, following an approximate 3% decline from 1989 to 1990.

Note: All figures in this article are in metric tons. Pulp & Paper International's *1991 Market Pulp Survey, a summary of which is published here, is an 80-page mill-by-mill listing of nearly 300 market pulp producers worldwide, covering production, capacity, export percentage, and brand names used. This survey is priced at $677 and is available from* Pulp & Paper International *in Brussels, Belgium. Fax: (322) 537-5626. Telex: 24672 mfp b.*

FIGURE 1: **Geographic distribution of world market pulp production, 1991.**



World market pulp capacity increased 1.6% from 1990, mostly due to projects coming online in Brazil, France, and Canada.

North America remains the dominant market pulp producer (Figure 1) with 47% of total production. And with the addition of 506,000 tons from Canada and 338,000 tons from the U.S. in the next three years, that position will be strengthened. A production shift is occurring among the other continents, however. Several European countries (Denmark, Norway, Sweden) experienced decreases in their market pulp capacity, causing Europe to drop to 34% from 37% in total production.

Gains in total production were made by Latin America, Asia/Australasia, and Africa. It is in these regions where significant capacity expansions are occurring, and these increases have begun to have a major effect on the market.

Brazil has surpassed Finland as the fourth largest market pulp producing country (Table 1), and its addition of 881,000 tons capacity in the next three years is more than the combined 844,000 tons of new capacity

TABLE 1: **1991 market pulp output for selected countries (000 metric tons).**

	Sulfate	Sulfite	Mechanical	Semi-chemical	Non-wood	Recycled	Total
Canada	6,405	528	1,101	—	—	71	**8,105**
U.S.	6,953	1,012	6	—	165	47	**8,183**
Sweden	2,654	385	395	—	—	—	**3,434**
Finland	1,091	164	75	—	—	60	**1,390**
Norway	280	152	238	32	—	—	**702**
Brazil	1,901	25	8	49	—	—	**1,983**
Japan	787	187	—	40	—	—	**1,014**
Portugal	1,198	113	—	—	—	—	**1,311**
France	730	257	3	—	—	—	**990**
Spain	541	17	35	—	5	—	**598**
New Zealand	290	—	126	—	—	—	**416**
Chile	625	—	—	—	—	—	**625**
U.S.S.R.	990	250	—	—	—	—	**1,240**
Total	**24,445**	**3,090**	**1,987**	**121**	**170**	**178**	**29,991**
Total world	**26,954**	**4,385**	**2,149**	**302**	**461**	**205**	**34,456**

Note: Dissolving included in sulfate and sulfite. Fluff included in sulfate, sulfite, and CTMP. Recycled is mainly deinked grades.

TABLE 2: **1991 market pulp exports from major producers (000 metric tons).**

Major importers	U.S.	Canada	Sweden	Finland	Norway	Brazil	Total
Europe	2,031	2,226	2,434	1,280	560	414	**8,945**
U.S.	—	3,718	31	8	—	331	**4,088**
Canada	207	—	7	—	—	3	**217**
Asia/Australasia	2,248	1,539	261	120	16	261	**4,445**
Latin America	448	116	—	2	—	19	**585**
Africa	118	4	36	5	6	1	**170**
World total	**5,052**	**7,603**	**2,769**	**1,415**	**582**	**1,029**	**18,450**

expected from the U.S. and Canada. Other countries also continue to expand their market pulp capacity, including Finland (485,000), France (110,000), Japan (286,000), Rep. Korea (160,000), Spain (123,000), Portugal (100,000), and Thailand (100,000).

As in years past, Canada remains the leading market pulp exporter (Table 2). A trend seen in last year's survey has continued, though: Canada decreased its exports by more than 620,000 tons, and Sweden cut back by more than 140,000 tons. The U.S. continued to increase its exports (up 230,000 tons), as did Brazil (up 140,000 tons).

Europe remains the major importer of market pulp (8.9 million tons), followed by Asia/Australasia (4.5 million tons) and the U.S. (4 million tons). However, Europe decreased its imports from 1990 levels (down 400,000 tons), as did Asia/Australasia (down 554,000 tons). The U.S., Canada, Latin America, and Africa increased their imports slightly from 1990.

HARDWOOD CONTINUES TO CLIMB. Bleached softwood kraft (BSK) is still the major market pulp grade (Figure 2), but it is beginning to slip as other grades—particularly bleached hardwood kraft—make significant gains (Table 3). In the 1990 survey, BSK accounted for a little more than 40% of total market pulp production. In this year's survey, it accounts for 39.83%.

Meanwhile, bleached hardwood kraft (BHK) has gained almost a full percentage point, making up almost 30% of total market pulp output in 1991, compared with 28.53% in 1990. Also, BHK capacity increased 3.2% from 1990 to 1991, while BSK capacity increased only 0.6%. And the capacity gain is expected to continue—BHK producers are expected to add 1.78 million tons of capacity in the next three years, compared with 1.56 million tons for BSK.

Figure 3 shows the downward trend of the last three years for BSK and how BHK has gotten back on an upward track after a sluggish market in 1990. The other pulps shown in Figure 3 probably reflect the stagnant state of the market, with little change in production.

Several surprises also appeared in this year's survey. Unbleached kraft pulp, which had experienced a 27.9% production increase from 1989 to 1990, dropped 58.9% from 1990 to 1991. Capacities for most mechanical pulps increased from 1990 to 1991, especially chemi-thermomechanical pulp (up 13.2%). Production of mechanical pulps suffered though, due to the price drop for BSK and BHK.

As for market pulp prices, if the steep price plunge that began in mid-1990 mirrored the paper industry's downturn, then it is possible the industry is beginning to climb out of the economic dive. Prices for northern bleached softwood kraft (NBSK) in Northern Europe (US$/ton) seemed to have hit bottom at $500 and had reached a fairly firm $540 in the second quarter of 1992 (Figure 4). According to *Pulp & Paper Week*, some major producers had already pushed through an increase to $600/ton by early third-quarter. ■

TABLE 3: **1991 market pulp output by grade and continent (000 metric tons).**

Grade	Europe	North America	Latin America	Asia/ Australasia	Africa	Total
BSK[1]	3,630	9,014	764	241	75	**13,724**
BHK[1]	4,203	3,152	1,789	983	171	**10,298**
UBK	549	564	401	429	160	**2,103**
Sulfite[2]	1,872	542	23	26	—	**2,463**
Dissolving	325	1,626	15	350	435	**2,751**
Semichemical	213	—	—	40	—	**253**
SGW	371	45	—	—	—	**416**
RMP/CMP/TMP	149	192	—	10	—	**351**
CTMP	338	870	58	116	—	**1,382**
Nonwood	55	165	74	164	52	**510**
Recycled[3]	87	118	—	—	—	**205**
World total	**11,792**	**16,288**	**3,124**	**2,359**	**893**	**34,456**

BSK = Bleached softwood kraft (sulfate). BHK = Bleached hardwood kraft (sulfate). UBK = Unbleached kraft (sulfate). SGW = Stone groundwood. RMP = Refiner-mechanical pulp. CMP = Chemimechanical pulp. TMP = Thermomechanical pulp. CTMP = Chemi-thermomechanical pulp.

1. Bleached and semibleached. 2. Bleached and unbleached. 3. Mainly deinked grades. Note: Fluff included in sulfate, sulfite, and CTMP.

FIGURE 2: **Grade distribution of world market pulp production, 1991.**

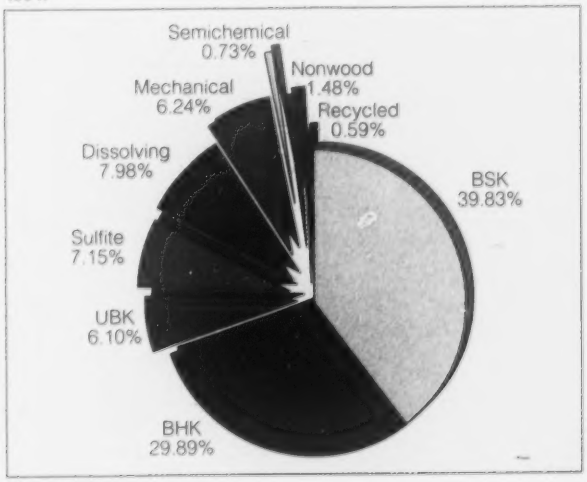


FIGURE 3: **World market pulp output, 1989, 1990, and 1991.**

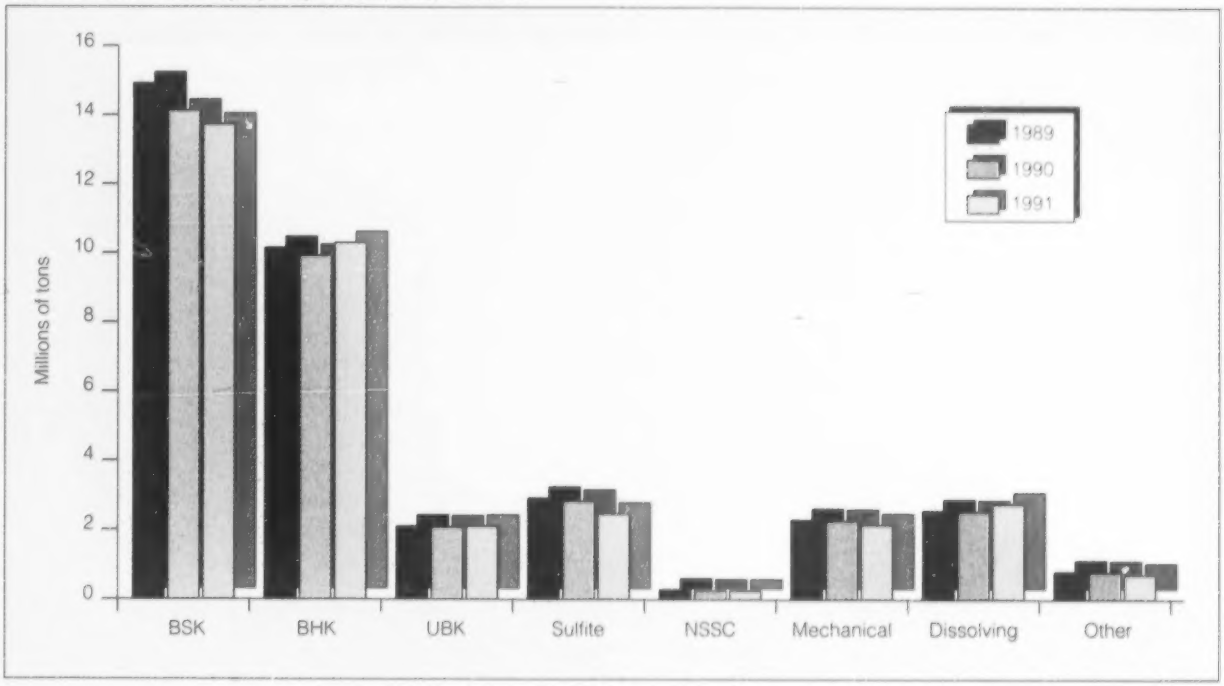
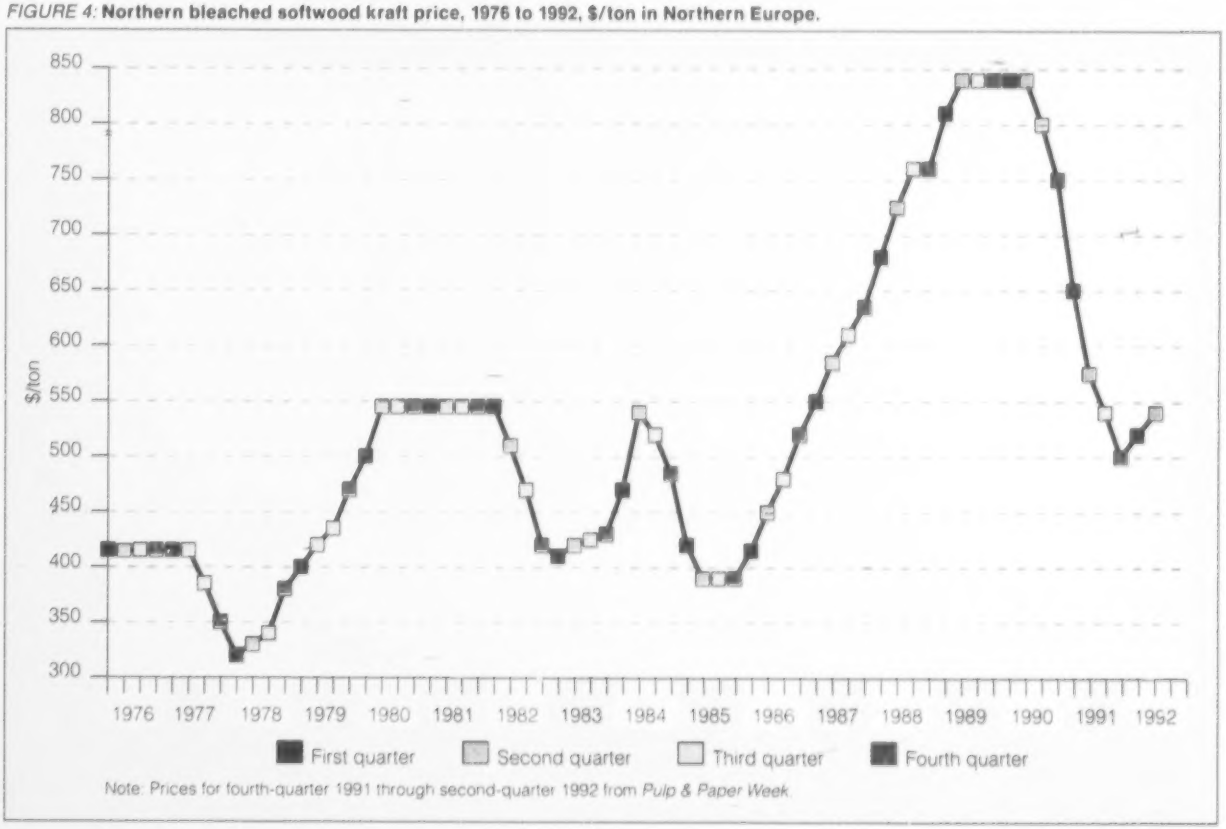


FIGURE 4: **Northern bleached softwood kraft price, 1976 to 1992, $/ton in Northern Europe.**



Note: Prices for fourth-quarter 1991 through second-quarter 1992 from *Pulp & Paper Week*.